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REPORT NO. 11

Cap 2

Cotton Fiber and Processing Test Results

CROP of

1975



**Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 January 16, 1976**

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season. These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

1/ Summary of Cotton Fiber and Processing Test Results, Crop of 1974, USDA, AMS, Cotton Division, May 1975.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1975

Discussion of Test Results

Short staple cottons tested from the Southwest through January 9 this season are shorter and finer than last season, according to the Cotton Division, Agricultural Marketing Service, USDA. Samples are stronger at zero gage tests. Picker and card waste is lower. Yarns spun from these samples are stronger and have higher appearance grades. Yarn imperfections are lower than a year earlier and the average spinning potential is a little higher.

Average test results for all medium staple samples tested through January 9 show fiber properties to be about the same as last season. Picker and card waste is lower. Yarn strength and appearance are practically the same as a year earlier. Yarn imperfections are higher and the spinning potential is slightly lower.

Southeastern medium staple samples are shorter than a year ago. Pressley zero gage strength tests show fibers to be stronger. Yarns are slightly weaker than a year earlier and appearance grades are a little lower. Yarn imperfections are higher than last season and the average spinning potential is lower.

South central medium staple samples tested so far this season are coarser and slightly stronger at zero gage fiber tests. Picker and card waste is lower. Yarn strength and appearance are about the same as last season.

Test results show southwestern medium staple samples to be finer than a year ago but to have about the same length and strength characteristics. Nonlint content is higher than last season but picker and card waste is a little lower. Yarns spun from these samples have more imperfections than a year ago. The other yarn qualities are about the same.

Medium staple samples from the West are slightly longer, finer and a little stronger than last season. Picker and card waste is lower. Yarns spun from these samples are stronger but appearance grades are lower. Average spinning potential is higher.

Average test results for all long staple samples show fibers to be shorter but stronger at zero gage tests than a year ago. Picker and card waste and comber waste are higher. Yarns spun from these show stronger combed yarn strength than a year ago. Yarn imperfections are higher. The average spinning potential number is lower.

Long staple samples from the Southeast are considerably shorter than last season. Fibers are coarser and are stronger at zero gage tests. Picker and card waste and comber waste are higher than a year ago. Yarn strength is weaker. Yarn appearance grades are higher than a year ago. Average spinning potential number is lower.

South central long staple samples tested thus far this season show shorter fibers and are stronger at zero gage strength tests. Yarns spun from these samples have higher yarn appearance grades than a year ago. Average spinning potential is lower.

Long staple samples from the West show finer fibers. Shirley Analyzer nonlint content is higher than a year ago. Both picker and card waste and comber waste are much higher than a year earlier at this time. Yarn spun from these samples are stronger but have lower appearance grades. Yarn imperfections are higher than a year ago.

American Pima samples tested to date are longer and stronger than last season. Comber waste is higher. Yarns are stronger than a year earlier.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through January 9, 1976 1/

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results					
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality		Spin. Potent.		
		2.5% span	50/2.5 unif.		Pct.	Rdg.			Mpsi	G/tex		Skein str.	Appear- ance
				Inches			Pct.	Pct.			Index		
		No.							Lbs.	Carded	Yarn		
22s Carded Yarn													
Short Staple: Southwest 1974 1975	42	.96	44	3.8	83	21	4.1	7.4	90	91	27	40	
	53	.94	45	3.6	86	21	4.0	6.7	97	107	20	42	
Medium Staple: Southeast 1974 1975	50	1.09	45	4.3	81	22	3.8	6.5	102	103	19	61	
	43	1.07	44	4.2	83	22	3.8	6.3	97	97	25	53	
South Central 1974 1975	128	1.10	44	4.0	83	23	3.2	6.3	105	102	18	63	
	114	1.10	45	4.3	85	23	3.1	5.7	105	101	21	59	
Southwest 1974 1975	44	1.07	44	4.0	84	23	3.2	6.4	101	87	23	58	
	34	1.06	43	3.7	83	22	3.7	6.2	103	87	32	56	
West 1974 1975	70	1.11	46	4.5	91	25	2.5	6.0	116	103	16	66	
	68	1.12	45	4.1	92	26	2.3	5.5	124	93	23	69	
U.S. Average 1974 1975	292	1.10	44	4.2	85	23	3.1	6.3	106	100	18	63	
	259	1.09	45	4.2	86	23	3.1	5.8	108	97	23	60	
Significant dif- ference <u>2/</u>		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3	

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through January 9, 1976

1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results									
		Length		Mike	Strength		SA Non- lint	P&C Waste	Comber Waste	Yarn Quality				SPY			
		Span	Unif		Zero gage	1/8" gage				Strength carded	Appearance carded	Imprfctns card	comb				
	No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Lbs.	Lbs.	Indx	Indx	No.	No.	No.		
									22s Carded & Combed Yarn								
Long Staple: Southeast	15	1.15	43	4.0	82	23	4.0	8.7	17.2	104	118	104	110	21	14	67	
	17	1.09	43	4.2	85	23	3.7	9.6	18.8	91	115	110	119	20	10	54	
South Central	6	1.15	44	4.0	85	23	4.0	8.8	18.0	105	125	102	113	19	8	65	
	6	1.11	43	4.0	88	23	3.8	9.2	18.1	104	125	110	120	19	9	62	
West	12	1.16	45	3.7	93	26	2.6	7.2	15.1	128	148	95	106	20	9	89	
	17	1.16	45	3.3	93	26	3.1	8.7	16.1	138	158	82	96	39	22	89	
U.S. Average	33	1.15	44	3.9	86	24	3.5	8.2	16.1	113	128	100	107	20	8	75	
	40	1.13	44	3.8	89	24	3.5	9.2	17.6	113	135	98	109	28	15	70	
		Array					American Pima					50's Combed Yarn					
Extra Long Staple: West	15	1.45	32	3.6	100	32	2.8	7.8	17.8		64		110		2		
	9	1.47	31	3.7	104	34	2.8	7.5	18.4		67		111		2		
Significant Difference 2/		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	4(22s)	5	5	2	2	3	

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1975

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
				Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- lint	Color		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent- ial	
							2.5% span	Unif			Zero	1/8" Gage		Gra	Yel	8s or 74 tx	22sor 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22sor 27 tx		8s or 74 tx
				No	Grade	Stple	In	Pct	Rdg	Mpsi	G/tex	Pct	No	No	Pct	Lbs	Pct	Pct	No	No	No	No	No
				32s																			
SOUTHWEST																					AREA		
NORTHWEST TEXAS																							
BURKBURVETT																							
1	MID LT SP	32	32	1.02	45	3.9	87	23	LANKART LX571	6.5	2.6	2	4	5.2	297	92	6.0	130	120	23	11	51	
2	SLM LT SP	42	33	1.02	45	3.8	87	23		6.3	2.5	2	4	4.8	319	104	6.0	120	110	28	11	50	
LOOP																							
3	SLM LT SP	42	29	0.92	45	2.8	81	22	PAYMASTER 18	7.2	4.0	2	4	7.2	306	98	6.4	110	100	56	28	37	
LOOP																							
3	SLM LT SP	42	30	0.89	45	3.0	84	21	STRIPPER 31	6.1	4.7	2	3	7.1	306	93	5.5	110	90	47	29	37	
LORENZO																							
3	SLM LT SP	42	30	0.93	44	2.7	85	22	PAYMASTER 909	7.1	4.5	3	4	6.9 1/2	319	105	7.6	120	90	60	22	48	
OLNEY																							
2	MID LT SP	32	31	0.99	44	3.9	80	21	LANKART 57	6.8	3.1	1	3	6.0	313	103	6.8	120	120	25	11	51	
PADUCAH																							
2	SLM SP	43 1/2	31	0.98	43	3.0	78	21	LANKART 57	7.6	5.0	2	5	6.6	323	110	6.7	120	90	69	34	50	
PLAINVIEW																							
3	LM	51 1/2	30	0.93	43	3.0	84	21	PAYMASTER 18	6.8	5.0	2	3	7.5	299	96	6.2	120	90	50	20	42	
RULE																							
1	MID LT SP	32	32	1.03	45	3.3	86	22	LANKART LX571	6.8	3.4	2	4	5.7	314	97	7.0	120	110	44	18	56	
SILVERTON																							
3	SLM LT SP	42	30	0.91	46	3.4	81	21	PAYMASTER 18	7.0	3.1	2	4	6.2	302	97	6.5	120	90	65	31	42	
OKLAHOMA																							
CORDELL																							
2	SLM LT SP	42	32	1.00	43	3.1	83	22	LANKART 57	7.1	4.3	2	4	6.1	316	104	6.8	120	90	49	23	50	
DAVIDSON																							
1	SLM LT SP	42	31	0.94	44	3.8	82	21	LANKART 57	7.5	4.8	2	4	6.8	302	100	6.5	130	100	37	14	44	
2	SLM LT SP	42	31	0.96	45	3.8	83	21		6.8	4.9	2	4	7.2	304	98	6.2	120	100	40	18	43	

1/ Cotton stuck to processing rolls

2/ Reduced from 33 because of bark

3/ Reduced from 41 because of bark

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1975--(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns										
Sample Number		Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- lint	Color Raw Stock		P & C		Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial			
		2.5% span	Unif		Gage	Zero			1/8" Gage	Gra	Yel	Waste	8s or 74 tx	22sor 27 tx	8s or 22s or 74 tx	27 tx	8s or 22sor 27 tx	74 tx	27 tx	8s or 74 tx		22sor 27 tx		
No	Grade	Stple	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No			
			32s																					
SOUTHWEST																								
AREA																								
NEW MEXICO																								
PORTALES																								
2	SLM LT SP	42	28	0.80	45	2.6	85	19	6.4	8.4	2	4	4	9.1	289	97	7.3	6.5	90	60	162	84	30	
3	SLM LT SP	42	28	0.84	46	2.7	85	21	6.6	9.0	2	4	4	9.6	292	88	6.7	5.6	90	60	152	84	30	

80 PERCENT

RILCOT 90

1/ Cotton stuck to processing rolls

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns											
No	Grade	Style	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial			
				2.5% span	Unif.		Zero Gage	1/8" Gage			Pct	Rdg		Mpsi	G/tex	Pct	Pct	Gra	No	Yel	22s or 27 tx		12 tx	22s or 27 tx	12 tx
WEST AREA																									
ARIZONA																									
CASA GRANDE																									
3	MID LT SP	32	36	1.13	42	3.5	81	23	7.8	2.6	0	3	6.3	105	41	6.5	5.0	90	70	25	19	68			
GILA BEND																									
3	SLM	41	34	1.09	43	4.7	83	23	6.0	3.3	1	3	6.4	104	32	5.6	3.7	90	80	16	14	52			
MARICOPA																									
3	MID	31	35	1.07	41	3.2	83	23	7.4	2.5	1	3	6.3	104	36	6.1	4.4	70	60	37	27	61			

1/ Cotton stuck to processing rolls

Production Area, Classification				Fiber Test Results										Processing Test Results - Carded Yarns									
Sample Number		Digital Fibrograph		Fiber Strength		Elon- gat'n 1/8"		S.A. Non- Lint		Color Raw Stock		P & C Comber Waste		Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial	
No	Grade Name & Code	Stple	32s	In	Pct	Rdg	Mpsi	Zero Gage	1/8" Gage	Pct	Pct	Gra	Yel	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	No	No
WEST																							
AREA																							
ARIZONA																							
DUNCAN																							
3	SLM PLUS	40	37	1.17	44	3.2	91	24	ACALA 1517-70	5.8	3.7	0	3	9.6	138	52	5.7	4.8	80	60	33	26	93
* 1/																							
NEW MEXICO																							
BERINO																							
3	SLM	41	36	1.15	42	2.6	87	26	ACALA 1517-70	6.3	4.3	0	2	9.9	129	48	6.4	4.8	60	60	67	49	90
* 19.8																							
TULAROSA																							
2	SLM	41	37	1.19	46	3.3	88	26	ACALA 1517-V	6.5	4.9	1	3	13.5	141	52	6.3	5.0	70	60	66	43	92
* 16.0																							
3	LM PLUS	50	37	1.19	46	3.3	90	26		6.1	6.2	1	3	12.3	143	55	6.5	5.3	60	70	83	65	94
* 15.0																							
WEST TEXAS																							
TORNILLO																							
3	SLM	41	37	1.14	42	3.0	92	24	ACALA 1517-C	5.7	3.8	1	2	10.7	138	50	5.8	4.8	60	60	49	45	91
* 16.3																							
99 PERCENT																							
138 50 6.1																							
156 60 6.1																							
5.1																							
5.1																							

* Comber Waste and Combed Yarn Data

1/ Insufficient cotton to run comber tests

Table 5 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1975

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns									
No	Grade	Stple	Name & Code	Array Length		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imprfect'ns		
				UQL	CV		Zero	1/8"			Gra	Yel			50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	
				In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	
		32s																					

WEST AREA

ARIZONA																					
PEORIA																					
2	3	44	1.50	30	4.0	104		PIMA S-4	7.0	5.2	3	5	6.7	19.4	37	5.1	4.5	110	110	2	1
100 PERCENT																					
STANFIELD																					
1	4	46	1.49	32	3.7	104		PIMA S-4	7.7	3.4	3	5	8.0	18.0	38	5.5	4.5	110	120	3	1
100 PERCENT																					

